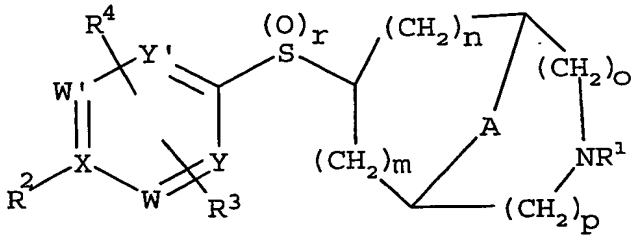
Claims:

1. A compound represented by Formula (I) or pharmaceutically acceptable salts thereof:



(I)

wherein:

R^1 is -H,

C_{1-12}alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C_{1-4}alkoxy or C_{1-4}alkylthio, or aryl-C_{1-4}alkyl;

R^2 is -H,

-OH,

$-NH_2$,

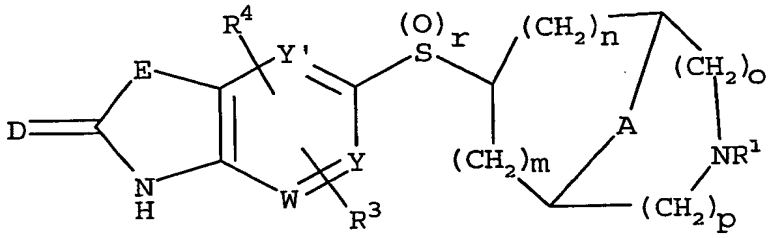
-NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or $-SO_2$-;
V is H, aryl, aryl-C_{1-12}alkyl, diaryl-C_{1-12}alkyl, lactonyl, or C_{1-18}alkyl optionally substituted with halogen, hydroxyl, C_{1-4}alkoxy, -C(O)OC_{1-4}alkyl, -OC(O)C_{1-4}alkyl, aryl-C_{1-4}alkoxy, aryloxy, or SO_2C_{1-4}alkyl; and
T is H, halogen, C_{1-5}alkyl, C_{1-4}alkoxy, nitro, aryl, aryl-C_{1-4}alkyl, or aryloxy unless V is H in which case T is absent,

aryl,

-$(L)_a$-Z, wherein L is CH_2, CO, O, NH or N(C_{1-4}alkyl) and a is 0 or 1;
and

Z is C_{1-3}alkyl-F, C_{0-3}alkyl-aryl-R^6, C_{0-3}alkyl-CO-R^6, C_{0-3}alkyl-CO-NR^6_2, C_{0-3}alkyl-CO_2-R^6, C_{0-3}alkyl-SO_2-R^6, C_{0-3}alkyl-SO_2-NR^6_2, C_{1-3}alkyl-OR^6, C_{1-3}alkyl-CN or C_{1-3}alkyl-NR^6_2, wherein each C_{0-3}alkyl or C_{1-3}alkyl portion is optionally substituted with from 1 to 6 groups selected from F and C_{1-5}alkyl,

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia)

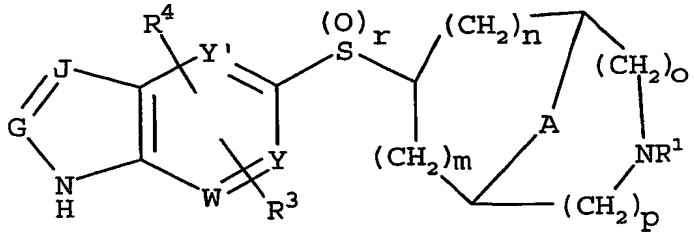


(Ia)

wherein D is O or S; and

E is O, S, NR^5, $C(R^5)_2$, O-CR^5_2, NR^5-CR^5_2, NR^5-CO, CR^5_2-O, CR^5_2-$S(O)_r$, CR^5_2-NR^5, CR^5_2-CR^5_2, CO-NR^5, or CR^5=CR^5; or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ib)



Formula (Ib)

wherein G is CR^5 or N; and

J is CR^5 or N;

unless X is N in which case R^2 is absent

R^3 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^4 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^5 is each independently H or C_{1-4}alkyl;

R^6 is each independently H, C_{1-6}alkyl, aryl or arylC_{1-4}alkyl, each of which (except H) may be optionally substituted with from 1 to 3 fluorine atoms;

X is C or N;

W is C or N;

W' is C or N;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring;

A is optionally a double bond, $(CH_2)_q$ or $(CH_2)O(CH_2)$;

m, n, o and p are independently 0, 1, 2 or 3;

q is optionally 1, 2 or 3;

r is 0, 1 or 2.

provided that

when X, W, W', Y and Y' are all C, R^3 is H, R^4 is H or Cl positioned *meta* to the sulphur atom, A is $(CH_2)_q$ and R^1 is selected from H, unsubstituted C_{1-4}alkyl and unsubstituted C_{3-4}cycloalkyl; then R^2 may not be H or –OH,

and that

when one of X, Y and Y' is N, R^3 is H, R^4 is H or Cl positioned *meta* to the sulphur atom, A is $(CH_2)_q$ and R^1 is selected from H, unsubstituted C_{1-4}alkyl and unsubstituted C_{3-4}cycloalkyl; then R^2 may not be H or –OH.

2. A compound as claimed in Claim 1

wherein:

R^2 is -H,

$-NH_2$,

-NH-Q-V-T as defined in claim 1,

aryl,

$-(L)_a$-Z as defined in claim 1,

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 1, or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ib) as defined in claim 1;

unless X is N in which case R^2 is absent.

3. A compound as claimed in Claim 1 or Claim 2

wherein:

R^2 is -NH-Q-V-T as defined in claim 1,

aryl,

$-(L)_a$-Z as defined in claim 1,

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 1, or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ib) as defined in claim 1;

unless X is N in which case R^2 is absent.

4. A compound as claimed in any one of Claims 1 to 3

wherein:

R^2 is -NH-Q-V-T wherein Q is -C(O)-NH-, or -C(O)O-;
V is as defined in claim 1; and
T is as defined in claim 1;

aryl,

$-(L)_a$-Z as defined in claim 1,

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia) as defined in claim 1, or

linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ib) as defined in claim 1;

unless X is N in which case R^2 is absent.

5. A compound as claimed in Claim 1

wherein:

R^1 is -H,

C_{1-12}alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C_{1-4}alkoxy or C_{1-4}alkylthio, or aryl-C_{1-4}alkyl;

R^2 is -H,

-OH,

$-NH_2$,

-NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or $-SO_2-$;

V is aryl, aryl-C_{1-12}alkyl, diaryl-C_{1-12}alkyl, lactonyl, or C_{1-18}alkyl optionally substituted with halogen, hydroxyl, C_{1-4}alkoxy, -C(O)OC_{1-4}alkyl, -OC(O)C_{1-4}alkyl, aryl-C_{1-4}alkoxy, aryloxy, or SO_2C_{1-4}alkyl; and

T is H, halogen, aryl, aryl-C_{1-4}alkyl, or aryloxy,

unless X is N in which case R^2 is absent

R^3 is H, halogen, C_{1-4}alkyl, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, $-SO_2NH_2$, $-SO_2NHC_{1-4}$alkyl, or -C_{1-4}alkyl-OH,

R^4 is H, halogen, C_{1-4}alkyl, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, $-SO_2NH_2$, $-SO_2NHC_{1-4}$alkyl, or -C_{1-4}alkyl-OH,

X is C or N,

W is C or N, provided that both X and Y are not N,

W' is C

Y is C or N

Y' is C

A is optionally a double bond, $(CH_2)_q$ or $(CH_2)O(CH_2)$,

m, n, o and p are independently 0, 1, 2 or 3

q is optionally 1, 2 or 3

r is 0.

6. A compound as claimed in claim 5 wherein R^1 is H, C_{1-6}alkyl optionally substituted with 1 or 2 hydroxyl groups, or aryl-C_{1-4}alkyl.

7. A compound as claimed in claim 6 wherein R^1 is benzyl, p-methoxybenzyl, furanylmethyl, imidazolylmethyl, pyridinylmethyl, thienylmethyl, pyridylmethyl, N-hydroxypyridylmethyl or thiazolylmethyl.

8. A compound as claimed in any one of claims 5 to 7 wherein R^2 is H, R^3 is carbonamido (-$CONH_2$) or C_{1-4}alkyl-OH, and R^4 is H, C_{1-4}alkyl, CF_3, halogen or cyano.

9. A compound as claimed in any one of claims 5 to 7 wherein R^2 is OH, and R^3 and R^4 each independently represent H, C_{1-4}alkyl, CF_3, cyano or halogen.

10. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-Q-V-T; T is H and R^3 and R^4 each independently represent H, methyl, CF_3, chloro- or cyano-.

11. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-SO_2-V-T; V is aryl, -C_{1-12}alkyl or aryl-C_{1-12}alkyl; R_3 is H, methyl, CF_3, Cl or cyano and R^4 is H.

12. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-SO_2-V-T, V is selected from C_{1-12}alkyl, phenyl, naphthyl, thienyl, oxazolyl, isoxazolyl, or phenyl(CH=CH)–, optionally substituted with 1, 2, 3 or 4 substituents selected from:

-NO_2;

halogen;
$-CF_3$;
C_{1-12}alkoxy;
C_{1-12}alkylthio;
C_{1-12}alkyl;
C_{1-4}alkylsulfonyl;
-CN;
$-OCF_3$;
$-C(O)OC_{1-4}$alkyl;
$-OCH_2CF_3$;
$-NHC(O)C_{1-4}$alkyl.

13. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – $NH-SO_2-V-T$, T is selected from H; or diazole, oxazole, isoxazole, phenyl or phenoxy, optionally substituted with 1, 2, 3 or 4 substituents selected from

$-NO_2$;
halogen;
$-CF_3$;
C_{1-12}alkoxy;
C_{1-12}alkylthio;
C_{1-12}alkyl;
C_{1-4}alkylsulfonyl;
-CN;
$-OCF_3$;
$-C(O)OC_{1-4}$alkyl;
$-OCH_2CF_3$;
$-NHC(O)C_{1-4}$alkyl.

14. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – $NH-SO_2-V-T$, V is selected from 3-chloro-4-methylphenyl, 3-chlorophenyl, 3-methoxyphenyl, 4-bromophenyl, 4-methoxyphenyl, 4-methylphenyl, naphthyl, 2,4,6-trimethylphenyl, phenyl(CH=CH)-, 4-chlorophenyl, 2-chlorophenyl, 2,5-dichlorothien-3-

yl, 2,5,6-trimethyl-4-methoxyphenyl, 4-methoxyphenyl, 2,3,4-trifluorophenyl, 3-cyanophenyl, 2-methoxycarbonylthien-3-yl or 4-pentylphenyl and T is H.

15. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-SO_2-V-T, T is 2-chloro-5-nitrophenoxy and V is phenyl.

16. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-C(O)-V-T wherein V is selected from aryl; aryl-C_{1-12}alkyl; diaryl-C_{1-12}alkyl; lactonyl; or C_{1-18}alkyl optionally substituted with halogen, hydroxyl, C_{1-4}alkoxy, C(O)OC_{1-4}alkyl, OC(O)C_{1-4}alkyl, aryl-C_{1-4}alkoxy or aryloxy.

17. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-C(O)-V-T, and V is selected from C_{1-12}alkyl, phenyl, phenyl-C_{1-12}alkyl, diphenylmethyl, naphthyl, furanyl, thienyl, diazolyl, pyridinyl, thiazolyl, benzothienyl, fluorenyl, oxazolyl or isoxazolyl, optionally substituted with 1, 2, 3 or 4 substituents independently selected from

-NO_2;
halogen;
-CF_3;
C_{1-12}alkoxy;
C_{1-12}alkylthio;
C_{1-12}alkyl;
C_{1-4}alkylsulfonyl;
-CN;
-OCF_3;
-C(O)O-C_{1-4}alkyl;
-OCH_2CF_3.

18. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-C(O)-V-T, T is selected from H; halogen; or diazole, oxazole, isoxazole, phenyl, phenoxy or benzodioxanyl optionally substituted with 1, 2, 3 or 4 substituents selected from

$-NO_2$;
halogen;
$-CF_3$;
C_{1-12}alkylthio;
C_{1-12}alkoxy;
C_{1-12}alkyl;
C_{1-4}alkylsulfonyl;
-CN;
$-OCF_3$;
$-C(O)O-C_{1-4}$alkyl.

19. A compound as claimed in any one of Claims 5 to 7 wherein R^2 is of formula – NH-C(O)NH-V-T wherein V is selected from C_{1-18}alkyl optionally substituted with halogen, hydroxyl, C_{1-4}alkoxy, $C(O)OC_{1-4}$alkyl, $OC(O)C_{1-4}$alkyl, aryl-C_{1-4}alkoxy or aryloxy; aryl; or aryl-C_{1-12}alkyl.

20. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-C(O)NH-V-T, V is selected from phenyl, phenyl-C_{1-12}alkyl or naphthyl optionally substituted with 1, 2, 3 or 4 substituents selected from

$-NO_2$;
halogen;
$-CF_3$;
C_{1-12}alkylthio;
C_{1-12}alkoxy;
C_{1-12}alkyl;
C_{1-4}alkylsulfonyl;
-CN;
$-OCF_3$;
$-C(O)O-C_{1-4}$alkyl.

21. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula – NH-C(O)O-V-T, wherein V is selected from C_{1-18}alkyl optionally substituted with

halogen, hydroxyl, C_{1-4}alkoxy, $C(O)OC_{1-4}$alkyl, $OC(O)C_{1-4}$ alkyl, aryl-C_{1-4}alkoxy or aryloxy; aryl; or aryl-C_{1-12}alkyl.

22. A compound as claimed in any one of claims 5 to 7 wherein R^2 is of formula –NH-C(O)O-V-T, preferably V is selected from phenyl or phenyl-C_{1-12}alkyl optionally substituted with 1, 2, 3 or 4 substituents selected from

$-NO_2$;
halogen;
$-CF_3$;
C_{1-12}alkylthio;
C_{1-12}alkoxy;
C_{1-12}alkyl;
C_{1-4}alkylsulfonyl;
-CN;
$-OCF_3$;
$-C(O)O-C_{1-4}$alkyl; or
$-OCH_2CF_3$.

23. A compound as claimed in claim 1 wherein R^2 is of formula –NH-C(O)-V-T
wherein V is H, C_{1-6}alkyl, C_{3-6}cycloalkyl, aryl or aryl-C_{1-12}alkyl; and
T is H, halogen, C_{1-5}alkyl, C_{1-4}alkoxy, nitro, aryl, aryl-C_{1-4}alkyl, or aryloxy unless V is H in which case T is absent.

24. A compound as claimed in claim 23
wherein V is H, C_{1-6}alkyl or C_{3-6}cycloalkyl; and
T is H unless V is H in which case T is absent.

25. A compound as claimed in claim 23
wherein V is aryl or aryl-C_{1-12}alkyl; and
T is H, halogen, C_{1-5}alkyl, C_{1-4}alkoxy, nitro, aryl, aryl-C_{1-4}alkyl, or aryloxy.

26. A compound as claimed in claim 25

wherein V is phenyl, pyridyl, thienyl, thiazolyl, thiadiazolyl, or phenyl-C_{1-6}alkyl;

and

T is H, halogen, C_{1-5}alkyl, C_{1-4}alkoxy, nitro, aryl, aryl-C_{1-4}alkyl, or aryloxy.

27. A compound as claimed in claim 1

wherein

R^1 is -H,

C_{1-12}alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C_{1-4}alkoxy or C_{1-4}alkylthio, or aryl-C_{1-4}alkyl;

R^2 is $-NH_2$, or

-NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or $-SO_2-$;
V is H, aryl, aryl-C_{1-12}alkyl, diaryl-C_{1-12}alkyl, lactonyl, or C_{1-18}alkyl optionally substituted with halogen, hydroxyl, C_{1-4}alkoxy, -$C(O)OC_{1-4}$alkyl, -$OC(O)C_{1-4}$alkyl, aryl-C_{1-4}alkoxy, aryloxy, or SO_2C_{1-4}alkyl; and
T is H, halogen, aryl, aryl-C_{1-4}alkyl, or aryloxy unless V is H in which case T is absent,

R^3 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^4 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

X is C;

W is C or N;

W' is C or N;

Y is C or N;

Y' is C or N;

provided that there are not more than two N atoms in the aryl ring and provided that at least one of W, W', Y or Y' is N;

A is optionally a CH=CH double bond, $(CH_2)_q$ or $(CH_2)O(CH_2)$;

m,n,o and p are independently 0, 1, 2 or 3;

q is optionally 1, 2 or 3;

r is 0, 1 or 2.

28. A compound as claimed in claim 27 wherein

W is C;

W' is C;

Y' is C; and

Y is N.

29. A compound as claimed in claim 27 wherein

W is N;

W' is C;

Y' is C; and

Y is C.

30. A compound as claimed in any one of claims 27 to 29 wherein

R^2 is $-NH_2$.

31. A compound as claimed in any one of claims 27 to 29 wherein

R^2 is -NH-Q-V-T, wherein Q is -C(O)-, -C(O)-NH-, -C(O)O-, or $-SO_2-$;

V is H, aryl, aryl-C_{1-12}alkyl, diaryl-C_{1-12}alkyl, lactonyl, or C_{1-18}alkyl optionally substituted with halogen, hydroxyl, C_{1-4}alkoxy, -

$C(O)OC_{1-4}$alkyl, $-OC(O)C_{1-4}$alkyl, aryl-C_{1-4}alkoxy, aryloxy, or SO_2C_{1-4}alkyl; and
T is H, halogen, aryl, aryl-C_{1-4}alkyl, or aryloxy unless V is H in which case T is absent.

32. A compound as claimed in claim 31 wherein

Q is $-SO_2-$ or –CO-.

33. A compound as claimed in claim 1 wherein

R^1 is -H,
C_{1-12}alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C_{1-4}alkoxy or C_{1-4}alkylthio, or aryl-C_{1-4}alkyl;

R^2 is aryl,

R^3 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or-C_{1-4}alkyl-OH,

R^4 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

X is C,

W is C or N;

W' is C or N;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring;

A is optionally a CH=CH double bond, $(CH_2)_q$ or $(CH_2)O(CH_2)$;

m,n,o and p are independently 0, 1, 2 or 3;

q is optionally 1, 2 or 3;

r is 0, 1 or 2.

34. A compound as claimed in claim 33 wherein R^2 is a C_3 to C_{12} aromatic or heteroaromatic group optionally substituted with one or more substituents selected from C_{1-12}alkyl, C_{1-12}alkoxy, thio, C_{1-12}alkylthio, carboxy, carboxy(C_{1-6}alkyl), formyl, C_{1-6}alkylcarbonyl, C_{1-6}alkylsulfonyl, C_{1-6}alkylcarbonylalkoxy, nitro, trihalomethyl, trihaloalkoxy, trihalomethoxy, trihalomethyl(C_{1-6}alkyl), hydroxy, hydroxy(C_{1-6})alkyl, (C_{1-6}alkoxy)carbonyl, amino, C_{1-6}alkylamino, di(C_{1-6}alkyl)amino, aminocarboxy, C_{1-6}alkylaminocarboxy, di(C_{1-6}alkyl)aminocarboxy, aminocarboxy(C_{1-6})alkyl, C_{1-6}alkylaminocarboxy(C_{1-6}alkyl), di(C_{1-6}alkyl)aminocarboxy(C_{1-6}alkyl), C_{1-6}alkylcarbonylamino, C_{1-6}alkylcarbonyl(C_{1-6}alkyl)amino, halo, C_{1-6}alkylhalo, sulphamoyl, tetrazolyl and cyano.

35. A compound as claimed in claim 33 wherein R^2 is phenyl, naphthyl, fluorenyl, thienyl, furanyl, pyrrolyl, imidazolyl, pyrazolyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, oxadiazolyl, thiadiazolyl, diazolyl, triazolyl, tetrazolyl, benzothiazolyl, benzimidazolyl, pyrrolinyl, imidazolinyl, pyranyl, pyronyl, pyridyl, pyrazinyl, pyridazinyl, thianaphthyl, benzofuranyl, isobenzofuranyl, benzothienyl, isobenzothienyl, indolyl, oxyindolyl, isoindolyl, indazolyl, indolinyl, 7-azaindolyl, azabenzimidazolyl, carbazolyl benzopyranyl, coumarinyl, isocoumarinyl, quinolinyl, isoquinolinyl, quinazolinyl, benzoxazinyl, quinoxalinyl, chromenyl, chromanyl, isochromanyl, phthalazinyl, benzodioxolyl, benzodioxanyl, cinnolinyl or carbolinyl optionally substituted with one or more substituents selected from C_{1-12}alkyl, C_{1-12}alkoxy, thio, C_{1-12}alkylthio, carboxy, carboxy(C_{1-6}alkyl), formyl, C_{1-6}alkylcarbonyl, C_{1-6}alkylsulfonyl, C_{1-6}alkylcarbonylalkoxy, nitro, trihalomethyl, trihaloalkoxy, trihalomethoxy, trihalomethyl(C_{1-6}alkyl), hydroxy, hydroxy(C_{1-6})alkyl, (C_{1-6}alkoxy)carbonyl, amino, C_{1-6}alkylamino, di(C_{1-6}alkyl)amino, aminocarboxy, C_{1-6}alkylaminocarboxy, di(C_{1-6}alkyl)aminocarboxy, aminocarboxy(C_{1-6})alkyl, C_{1-6}alkylaminocarboxy(C_{1-6}alkyl), di(C_{1-6}alkyl)aminocarboxy(C_{1-6}alkyl), C_{1-6}alkylcarbonylamino, C_{1-6}alkylcarbonyl(C_{1-6}alkyl)amino, halo, C_{1-6}alkylhalo, sulphamoyl, tetrazolyl and cyano.

36. A compound as claimed in claim 33 wherein R^2 is phenyl, thienyl, imidazolyl, oxazolyl, isoxazolyl, oxadiazolyl, thiadiazolyl, diazolyl, triazolyl, tetrazolyl, benzothiazolyl, benzimidazolyl, pyridyl, pyrazinyl, pyridazinyl, benzofuranyl, benzothienyl, or quinolinyl, optionally substituted with one or more substituents selected from C_{1-12}alkyl, C_{1-12}alkoxy, thio, C_{1-12}alkylthio, carboxy, carboxy(C_{1-6}alkyl), formyl, C_{1-6}alkylcarbonyl, C_{1-6}alkylsulfonyl, C_{1-6}alkylcarbonylalkoxy, nitro, trihalomethyl, trihaloalkoxy, trihalomethoxy, trihalomethyl(C_{1-6}alkyl), hydroxy, hydroxy(C_{1-6})alkyl, (C_{1-6}alkoxy)carbonyl, amino, C_{1-6}alkylamino, di(C_{1-6}alkyl)amino, aminocarboxy, C_{1-6}alkylaminocarboxy, di(C_{1-6}alkyl)aminocarboxy, aminocarboxy(C_{1-6})alkyl, C_{1-6}alkylaminocarboxy(C_{1-6}alkyl), di(C_{1-6}alkyl)aminocarboxy(C_{1-6}alkyl), C_{1-6}alkylcarbonylamino, C_{1-6}alkylcarbonyl(C_{1-6}alkyl)amino, halo, C_{1-6}alkylhalo, sulphamoyl, tetrazolyl and cyano.

37. A compound as claimed in claim 1

wherein:

R^1 is -H,
C_{1-12}alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C_{1-4}alkoxy or C_{1-4}alkylthio, or aryl-C_{1-4}alkyl;

R^2 is $(L)_a$-Z, wherein L is O, CO, CH_2, NH or N(C_{1-4}alkyl) and a is 0 or 1; and
Z is C_{1-3}alkyl-F, C_{0-3}alkyl-aryl-R^6, C_{0-3}alkyl-CO-R^6, C_{0-3}alkyl-CO-NR^6_2, C_{0-3}alkyl-CO_2-R^6, C_{0-3}alkyl-SO_2-R^6, C_{0-3}alkyl-SO_2-NR^6_2, C_{1-3}alkyl-OR^6, C_{1-3}alkyl-CN or C_{1-3}alkyl-NR^6_2 wherein each C_{0-3}alkyl or C_{1-3}alkyl portion is optionally substituted with from 1 to 6 groups selected from F and C_{1-5}alkyl,

R^3 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^4 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^6 is each independently H, C_{1-6}alkyl, aryl, or arylC_{1-4}alkyl, each of which (except H) may be optionally substituted with from 1 to 3 fluorine atoms;

X is C;

W is C or N,

Y is C or N,

W' is C or N,

Y' is C or N,

provided that there are no more than two N atoms in the aryl ring,

A is optionally a double bond, $(CH_2)_q$ or $(CH_2)O(CH_2)$;

m,n,o and p are independently 0, 1, 2 or 3;

q is optionally 1, 2 or 3;

r is 0, 1 or 2.

38. A compound as claimed in claim 37 wherein L is O, CO or CH_2.

39. A compound as claimed in claim 37 wherein L is NH or N(C_{1-4}alkyl).

40. A compound as claimed in any one of claims 37 to 39 wherein Z is C_{0-3}alkyl-aryl-R^6, C_{0-3}alkyl-CO-NR^6_2, C_{0-3}alkyl-CO_2-R^6, C_{1-3}alkyl-OR^6 or C_{1-3}alkyl-NR^6_2 wherein each C_{0-3}alkyl or C_{1-3}alkyl portion is optionally substituted with from 1 to 6 groups selected from F and C_{1-5}alkyl.

41. A compound as claimed in any one of claims 37 to 40 wherein Z is C_{0-3}alkyl-aryl-R^6 wherein aryl is selected from phenyl, naphthyl, fluorenyl, thienyl, furanyl, pyrrolyl, imidazolyl, pyrazolyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, oxadiazolyl, thiadiazolyl, diazolyl, triazolyl, tetrazolyl, benzothiazolyl, benzimidazolyl, pyrrolinyl, imidazolinyl, pyranyl, pyronyl, pyridyl, pyrazinyl, pyridazinyl, thianaphthyl, benzofuranyl, isobenzofuranyl, benzothienyl, isobenzothienyl, indolyl, oxyindolyl, isoindolyl, indazolyl,

indolinyl, 7-azaindolyl, azabenzimidazolyl, carbazolyl benzopyranyl, coumarinyl, isocoumarinyl, quinolinyl, isoquinolinyl, quinazolinyl, benzoxazinyl, quinoxalinyl, chromenyl, chromanyl, isochromanyl, phthalazinyl, benzodioxolyl, benzodioxanyl, cinnolinyl or carbolinyl optionally, be substituted with one or more substituents selected from C_1 to C_{12} alkyl (preferably C_1 to C_6 alkyl), C_1 to C_{12} alkoxy (preferably C_1 to C_6 alkoxy), thio, C_1 to C_{12} alkylthio (preferably C_1 to C_6 alkylthio), carboxy, carboxy(C_1 to C_6)alkyl, formyl, C_1 to C_6 alkylcarbonyl, C_1 to C_6 alkylsulfonyl, C_1 to C_6 alkylcarbonylalkoxy, nitro, trihalomethyl, trihalo(C_1 to C_6 alkoxy), trihalomethoxy, trihalomethyl(C_1 to C_6 alkyl), hydroxy, hydroxy(C_1 to C_6)alkyl, (C_1 to C_6 alkoxy)carbonyl, amino, C_1 to C_6 alkylamino, di(C_1 to C_6 alkyl)amino, aminocarboxy, C_1 to C_6 alkylaminocarboxy, di(C_1 to C_6 alkyl)aminocarboxy, aminocarboxy(C_1 to C_6)alkyl, C_1 to C_6 alkylaminocarboxy(C_1 to C_6)alkyl, di(C_1 to C_6 alkyl)aminocarboxy(C_1 to C_6)alkyl, C_1 to C_6 alkylcarbonylamino, C_1 to C_6 alkylcarbonyl(C_1 to C_6 alkyl)amino, halo, C_1 to C_6 alkylhalo, sulphamoyl, tetrazolyl and cyano and wherein each C_{0-3}alkyl portion is optionally substituted with from 1 to 3 groups selected from F and C_{1-3}alkyl.

42. A compound as claimed in any one of claims 37 to 40 wherein Z is C_{1-3}alkyl-CO-NR^6_2, wherein each C_{1-3}alkyl portion is optionally substituted with from 1 to 3 groups selected from F and C_{1-3}alkyl.

43. A compound as claimed in any one of claims 37 to 40 wherein Z is C_{1-3}alkyl-CO_2-R^6, wherein each C_{1-3}alkyl portion is optionally substituted with from 1 to 3 groups selected from F and C_{1-3}alkyl.

44. A compound as claimed in any one of claims 37 to 40 wherein Z is C_{1-3}alkyl-OR^6 wherein each C_{1-3}alkyl portion is optionally substituted with from 1 to 3 groups selected from F and C_{1-3}alkyl.

45. A compound as claimed in any one of claims 37 to 40 wherein Z is C_{1-3}alkyl-NR^6_2 wherein each C_{1-3}alkyl portion is optionally substituted with from 1 to 3 groups selected from F and C_{1-3}alkyl.

46. A compound as claimed in any one of claims 37 to 45 wherein R^6 is/are each independently H, C_{1-6}alkyl, phenyl, or phenylC_{1-4}alkyl, each of which (except H) may be optionally substituted with from 1 to 3 fluorine atoms.

47. A compound as claimed in any one of claims 37 to 46 wherein R^6 is/are each independently H, methyl, ethyl, propyl, cyclohexyl, or benzyl, each of which (except H) may be optionally substituted with 1, 2 or 3 fluorine atoms.

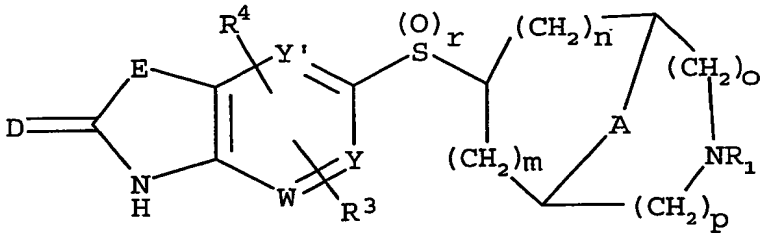
48. A compound as claimed in Claim 1

wherein:

R^1 is -H,

C_{1-12}alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C_{1-4}alkoxy or C_{1-4}alkylthio, or aryl-C_{1-4}alkyl;

R^2 is linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia)



(Ia)

wherein D is O or S; and

E is O, S, NR^5, or $C(R^5)_2$,

R^3 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^4 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-}

$_{10}$cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^5 is each independently H or C_{1-4}alkyl;

X is C;

W is C or N;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring,

A is optionally a double bond, $(CH_2)_q$ or $(CH_2)O(CH_2)$;

m,n,o and p are independently 0, 1, 2 or 3;

q is optionally 1, 2 or 3;

r is 0, 1 or 2.

49. A compound as claimed in Claim 48 wherein E is O or NR^5.

50. A compound as claimed in Claim 48 or 49 wherein R^5 is/are each independently H or C_{1-4}alkyl.

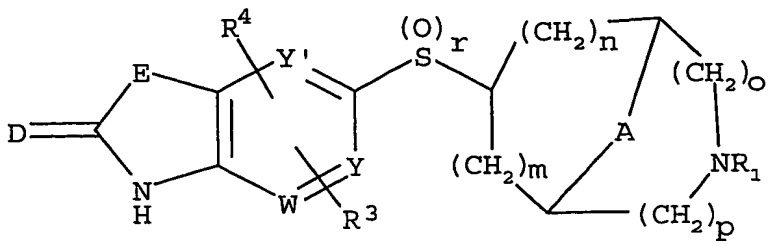
51. A compound as claimed in Claim 1

wherein:

R^1 is -H,

C_{1-12}alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C_{1-4}alkoxy or C_{1-4}alkylthio, or aryl-C_{1-4}alkyl;

R^2 is linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ia)



(Ia)

wherein D is O or S; and

E is O-CR^5_2, NR^5-CR^5_2, NR^5-CO, CR^5_2-O, CR^5_2-$S(O)_r$, CR^5_2-NR^5, CR^5_2-CR^5_2, CO-NR^5, or CR^5=CR^5;

R^3 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^4 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^5 is each independently H, C_{1-4}alkyl;

X is C;

W is C or N;

Y is C or N;

Y' is C or N;

provided that there are no more than two N atoms in the aryl ring;

A is optionally a double bond or $(CH_2)_q$ or $(CH_2)O(CH_2)$;

m,n,o and p are independently 0, 1, 2 or 3;

q is optionally 1, 2 or 3;

r is 0, 1 or 2.

52. A compound as claimed in Claim 51 wherein E is O-CR^5_2, NR^5-CR^5_2, NR^5-CO, CR^5_2-CR^5_2, or CR^5=CR^5.

53. A compound as claimed in Claim 51 or 52 wherein E is O-CR^5_2, NR^5-CO, or CR^5=CR^5.

54. A compound as claimed in any one of Claims 51 to 53 wherein R^5 is/are each independently H or C_{1-4}alkyl.

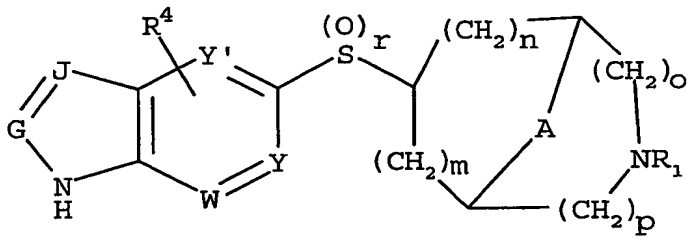
55. A compound as claimed in Claim 1

wherein:

R^1 is -H,

C_{1-12}alkyl optionally substituted with 1, 2 or 3 groups independently selected from halogen, hydroxyl, thiol, C_{1-4}alkoxy or C_{1-4}alkylthio, or aryl-C_{1-4}alkyl;

R^2 is linked back to the aromatic ring so as to form a fused bicyclic compound represented by Formula (Ib)



Formula (Ib)

wherein G is CR^5 or N; and

J is CR^5 or N;

R^3 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^4 is H, halogen, C_{1-4}alkyl optionally substituted with from 1 to 3 fluorine atoms, cyano, CF_3, OC_{1-4}alkyl, aryloxy, arylC_{1-4}alkyl, arylC_{1-4}alkoxy, C_{3-10}cycloalkoxy, carboxy, carbonamido, -CO-NH-C_{1-4}alkyl, aryl, hydroxy, -SO_2NH_2, -SO_2NHC_{1-4}alkyl, or -C_{1-4}alkyl-OH;

R^5 is each independently H or C_{1-4}alkyl;

X is C;

W is C or N;

Y is C or N;

Y' is C or N

provided that there are no more than two N atoms in the aryl ring;

A is optionally a double bond or $(CH_2)_q$ or $(CH_2)O(CH_2)$;

m,n,o and p are independently 0, 1, 2 or 3;

q is optionally 1, 2 or 3;

r is 0, 1 or 2.

56. A compound as claimed in Claim 5 wherein each R^5 is H.

57. A compound as claimed in Claim 1 or any one of claims 23 to 56 wherein r is 0.

58. A compound as claimed in Claim 1 or any one of claims 23 to 56 wherein r is 2.

59. A compound as claimed in any one of Claims 1 to 6 or 8 to 58 wherein R^1 is H or C_{1-3}alkyl, preferably methyl.

60. A compound as claimed in any preceding claim wherein A is CH_2, CH_2CH_2 or CH=CH.

61. A compound as claimed in any preceding claim wherein m and n are 1 or 2 and o and p are 0 or 1.

62. A compound as claimed in any preceding claim wherein m and n are 1 and o and p are 0.

63. A compound as claimed in any preceding claim wherein m and n are 1, o and p are 0 and A is CH_2CH_2 or CH=CH.

64. A compound as claimed in any preceding claim wherein
R^3 is H, halogen, C_{1-4}alkyl, CF_3, or OC_{1-4}alkyl, and
R^4 is H, halogen, C_{1-4}alkyl, CF_3, or OC_{1-4}alkyl.

65. A compound as claimed in any preceding claim wherein one or both of R^3 and R^4 are positioned ortho to the $S(O)_r$ moeity.

66. A pharmaceutical composition comprising a compound as claimed in any preceding claim with a pharmaceutically acceptable diluent or carrier.

67. A compound as claimed in any one of claims 1 to 65 or a composition as claimed in claim 66 for use in therapy.

68. Use of a compound as claimed in any one of claims 1 to 65 for the manufacture of a medicament for the treatment of a condition indicating treatment with a beta 4 subtype selective nicotinic acetylcholine receptor modulator.

69. A method of treatment of a condition indicating treatment with a beta 4 subtype selective nicotinic acetylcholine receptor modulator comprising administering an effective amount of a compound as claimed in any one of claims 1 to 65 or a composition as claimed in claim 66 to a patient in need thereof.

70. Use of a compound as claimed in any one of claims 1 to 65 for the manufacture of a medicament for the treatment of dysfunctions of the central and autonomic nervous systems.

71. A method of treatment of dysfunctions of the central and autonomic nervous systems comprising administering an effective amount of a compound as claimed in any one of claims 1 to 65 or a composition as claimed in claim 63 to a patient in need thereof.